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10/757,102	01/14/2004	Sachin Govind Deshpande	10237.28	2922
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KIRTON & MCCONKIE 1800 EAGLE GATE TOWER / 60 EAST SOUTH TEMPLE P.O. BOX 45120 SALT LAKE CITY, UT 84145-0120			EXAMINER NAJEE-ULLAH, TARIQ S	
			ART UNIT 4121	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/757,102	DESHPANDE, SACHIN GOVIND	
	Examiner	Art Unit	
	Tariq S. Najee-ullah	4121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/23/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is the first Office action in response to Application 10/757,102 titled "Systems and Methods for Providing a Discovery Protocol" filed on January 14, 2004 by Sachin Deshpande. Claims 1-29 have been examined and are pending.

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on April 23, 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

Claim Objections

2. Claim 7 is objected to under 37 CFR 1.75 because of the following informalities: server is misspelled "sever". Appropriate correction is required.
3. Claim 10 is objected to under Rule 75 because of the following informalities: (iii) a multicast procedure is mislabeled. It should read (ii) a multicast procedure. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 9,14-19,27, and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 9 and 27 refer to "a version of the server" without specifying any type of server type. The examiner interprets this in the broadest reasonable interpretation of server to one of ordinary skill in the art. The examiner's definition considers the following synonymous with the term server: a server application, operating system, computer, peer-to-peer network, client-server software architecture, or appliance.

7. Claim 14 recites the limitation "a method as recited" in claim 13. There is insufficient antecedent basis for this limitation in the claim. Claim 13 doesn't reference or state "a method" of any type. Due to this insufficiency, the claims are also vague and indefinite as to how the claims are interconnected.

8. Claims 15-17, and 19 recite the limitation "a networked system as recited" in claim 14. There is insufficient antecedent basis for this limitation in the claim. Claim 14 doesn't reference or state "a networked system" of any type. Due to this insufficiency, the claims are also vague and indefinite as to how the claims are interconnected.

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9. Claim 18 recites the limitation "a networked system as recited" in claim 17. There is insufficient antecedent basis for this limitation in the claim. Due to this insufficiency, the claims are also vague and indefinite as to how the claims are interconnected.

10. Claim 27 recites the limitation "a method as recited" in claim 26. There is insufficient antecedent basis for this limitation in the claim. Claim 26 doesn't reference or state "a method" of any type. Due to this insufficiency, the claims are also vague and indefinite as to how the claims are interconnected.

11. Claim 29 recites the limitation "a method as recited" in claim 28. There is insufficient antecedent basis for this limitation in the claim. Claim 28 doesn't reference or state "a method" of any type. Due to this insufficiency, the claims are also vague and indefinite as to how the claims are interconnected.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Weisman et al., US Publication Number 2002/0112058, 'Weisman' hereinafter.

Regarding claim 1, Weisman discloses **in a networked system that includes a client and a server** (page 26, paragraph [0812]; each device has a client and search for a server when the device is first connected to the network), **a method for discovering particular information on the networked system** (pg. 3, par. [0044]; Hosted devices register their services with the registrar including providing discovery information for their services. New devices registering services with the registrar is a method for discovering particular information.), **the method comprising: initiating a request at the client to discover the particular information** (pg. 1, par. [0005]; a device hosting framework provides services for software and devices to expose themselves i.e. initiate a service discovery request as controlled devices per a peer networking protocol), **wherein the request is made using at least one of: (i) a broadcast procedure; and (ii) a multicast procedure** (pg. 28, par. [0842]; when any new device is added to the network, it multicasts a discovery message i.e. makes a request using a multicast procedure. A multicast refers to a multiplexed broadcast.); **receiving a response to the request from a server after a random delay time; and establishing a connection with the server** (pg. 3, par. [0045]; the web server services incoming requests i.e. responds to the request under the peer networking protocol; pg. 32, par. [0951]; device responses are delayed a random duration i.e. a random delay time).

Regarding claim 2, Weisman discloses **a method as recited in claim 1, wherein the request is further made using a randomized exponential backoff strategy** (pg. 32, par. [0951]; device responses are delayed a random duration i.e. a randomized backoff strategy).

Regarding claim 3, Weisman discloses **a method as recited in claim 2, wherein the request identifies a particular part of a server where the particular information may be**

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located (figure 2 and pg. 3, par. [0045]; the web server services incoming requests for description, presentation, service control and eventing addressed to the registered services i.e. information located in the registrar part of the server.).

Regarding claim 4, Weisman discloses **a method as recited in claim 2, wherein the client is a television that is configured to provide programming content** (pg. 16, par. [0418]; a digital TV i.e. television configured to provide digital programming content, is connected to the computer network).

Regarding claim 5, Weisman discloses **a method as recited in claim 4, wherein the client is a television and the server is a computer device** (fig. 24 and pg. 16, par. [0417-0418]; the server shown in fig. 24 is a PC i.e. computer device. PC 1002 and 1004 form a computer network via a local area network (LAN). A digital TV i.e. television, is connected to the computer network).

Regarding claim 6, Weisman discloses **a method as recited in claim 2, further comprising a step for receiving a second response to the request from a second server after the random delay time** (pg. 32, par. [0951]; device responses are delayed a random duration i.e. a random delay time; pg. 29, par. [0849]; a device multicasts a number i.e. a second or more responses, of discovery messages that are re-sent if the device remains available; pg. 15, par. [0406]; servers i.e. at least a second server, mainframe, and various computers work with Weisman's invention).

Regarding claim 7, Weisman discloses **a method as recited in claim 6, wherein the step for establishing a connection further comprises a step for determining not to connect to the second server** (pg. 29, par. [0849]; a device multicasts a number i.e. a second or more responses,

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of discovery messages that are re-sent if the device remains available. Messages include a duration until they expire. If the device is unavailable, the device cancels the discovery advertisement. The duration is a step for determining not to connect; pg. 15, par. [0406]; servers i.e. at least a second server, mainframe, and various computers work with Weisman's invention).

Regarding claim 8, Weisman discloses **a method as recited in claim 7, wherein the step for determining not to connect to the second server is based on at least one of: (i) whether the client has established a connection with another server** (pg. 29, par. [0849]; a device multicasts a number i.e. a second or more responses, of discovery messages that are re-sent if the device remains available. If the device is unavailable i.e. connected to another server or inoperative, the device cancels the discovery advertisement.); **and (ii) a characteristic of the server which the client establishes a connection** (pg. 14, par. [0376, 0378]; requests from the device i.e. client establish a subscription, i.e. connection or re-subscription, i.e. second connection or connection to second server, with the server; pg. 15, par. [0395]; the server header, i.e. character information of the server is the version of the operating system on the computer, i.e. server).

Regarding claim 9, Weisman discloses **a method as recited in claim 8, wherein the characteristic of the server is a version of the server** (pg. 15, par. [0395]; the server header, i.e. character information of the server is the version of the operating system on the computer, i.e. server. Also see pg. 29, par. [0846]; version information is communicated in discovery and description messages).

Regarding claim 10, Weisman discloses **a method as recited in claim 2, further comprising: discovering a network disconnect; initiating a second request at the client to**

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discover the particular information, wherein the second request is made using at least one of: (i) a broadcast procedure; and (iii) a multicast procedure (pg. 29, par. [0849]; a device multicasts a number i.e. a second or more responses, of discovery messages that are re-sent if the device remains available. If the device is unavailable i.e. connected to another server or inoperative, the device cancels the discovery advertisement. A multicast refers to a multiplexed broadcast.); **receiving a subsequent response to the second request from the server after a random delay time** (pg. 32, par. [0951]; device responses are delayed a random duration i.e. a random delay time); **and establishing a second connection with the server** (pg. 29, par. [0849]; a device multicasts a number i.e. a second or more responses, of discovery messages that connects the device to the server).

Regarding claim 11, Weisman discloses **a method as recited in claim 10, wherein the request is further made using a randomized exponential backoff strategy** (pg. 32, par. [0951]; device responses are delayed a random duration i.e. a randomized backoff strategy).

Regarding claim 12, Weisman discloses **a method as recited in claim 2, wherein the request uses a user datagram protocol** (pg. 26, par. [0811]; the messages are delivered running over user datagram protocol (UDP)).

Regarding claim 13, Weisman discloses **a networked system comprising: a server coupled to a network; and a client coupled to the network** (page 26, paragraph [0812]; each device has a client and search for a server when the device is first connected to the network), **wherein the client is configured to selectively provide a request on the network to discover the server** (pg. 1, par. [0005]; a device hosting framework provides services for software and devices to expose themselves i.e. initiate a service discovery request as controlled devices per a

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peer networking protocol), wherein the client is configured to selectively provide programming content to a viewer (pg. 16, par. [0418]; a digital TV i.e. client is configured to provide digital programming content, is connected to the computer network. A remote control is used to interact with a viewer.), and wherein the a request is made at least one of (i) a broadcast procedure and (ii) a multicast procedure (pg. 28, par. [0842]; when any new device is added to the network, it multicasts a discovery message i.e. makes a request using a multicast procedure. A multicast refers to a multiplexed broadcast.).

Regarding claim 14, Weisman discloses a method as recited in claim 13, wherein the request is further made using a randomized exponential backoff strategy (pg. 32, par. [0951]; device responses are delayed a random duration i.e. a randomized backoff strategy).

Regarding claim 15, Weisman discloses a networked system as recited in claim 14, wherein the network is a home network (pg. 26, par. [0803]; for networked devices in home, office, and public spaces).

Regarding claim 16, Weisman discloses a networked system as recited in claim 14, wherein the request identifies a particular part of the server where desirable information is located (pg. 7, par. [0137] Given the service instance name in the control URL, the Web Server is able to locate the service implementation, i.e. desirable information in the hosted device. To do this, the Web Server instantiates the Registrar; pg. 3, par. [0044] Hosted devices register their services with the registrar including providing discovery information for their services. New devices registering services with the registrar).

Regarding claim 17, Weisman discloses **a networked system as recited in claim 14, wherein the client is a television** (pg. 16, par. [0418]; a digital TV i.e. client is connected to the computer network).

Regarding claim 18, Weisman discloses **a networked system as recited in claim 17, wherein the client is a TV and the server is a computer device** (fig. 24 and pg. 16, par. [0417-0418]; the server shown in fig. 24 is a PC i.e. computer device. PC 1002 and 1004 form a computer network via a local area network (LAN). A digital TV i.e. television, is connected to the computer network).

Regarding claim 19, Weisman discloses **a networked system as recited in claim 14, wherein the request uses a user datagram protocol** (pg. 26, par. [0811]; the messages are delivered running over user datagram protocol (UDP)).

Regarding claim 20 Weisman discloses **a computer program product for implementing within a computer system a method for discovering particular information on the networked system, the computer program product comprising: a computer readable medium for providing computer program code means utilized to implement the method, wherein the computer program code means is comprised of executable code for implementing the steps for: initiating a request at the client to discover the particular information** (pg. 57, claim 9 references a computer-readable data carrying medium containing a link-able executable program for a discovery programming interface for receiving device discovery data from the logical device.), **wherein the request is made using at least one of: (i) a broadcast procedure; and (ii) a multicast procedure** (pg. 28, par. [0842]; when any new device is added to the network, it multicasts a discovery message i.e. makes a request using a

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multicast procedure. A multicast refers to a multiplexed broadcast.); **receiving a response to the request from a server after a random delay time; and establishing a connection with the server** (pg. 3, par. [0045]; the web server services incoming requests i.e. responds to the request under the peer networking protocol; pg. 32, par. [0951]; device responses are delayed a random duration i.e. a random delay time).

Regarding claim 21, Weisman discloses **a computer program product as recited in claim 20** (pg. 57, claim 9 references a computer-readable data carrying medium containing a link-able executable program for a discovery programming interface for receiving device discovery data from the logical device.), **wherein the request is further made using a randomized exponential backoff strategy** (pg. 32, par. [0951]; device responses are delayed a random duration i.e. a randomized backoff strategy).

Regarding claim 22, Weisman discloses **a computer program product as recited in claim 21** (pg. 57, claim 9 references a computer-readable data carrying medium containing a link-able executable program for a discovery programming interface for receiving device discovery data from the logical device.), **wherein the client is a television that is configured to provide programming content** (pg. 16, par. [0418]; a digital TV i.e. logical device i.e. television configured to provide digital programming content, is connected to the computer network).

Regarding claim 23, Weisman discloses **a computer program product as recited in claim 21** (pg. 57, claim 9 references a computer-readable data carrying medium containing a link-able executable program for a discovery programming interface for receiving device discovery data from the logical device.), **wherein the client is a television and the server is a**

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computer device (fig. 24 and pg. 16, par. [0417-0418]; the server shown in fig. 24 is a PC i.e. computer device. PC 1002 and 1004 form a computer network via a local area network (LAN). A digital TV i.e. logical device i.e. television, is connected to the computer network; pg. 57, claim 9 discloses a connection between a logical device i.e. television and a computer).

Regarding claim 24, Weisman discloses a **computer program product as recited in claim 21, wherein the computer program code means is further comprised of executable code for implementing a step for receiving a second response to the request from a second server after the random delay time** (pg. 57, claim 9 references a computer-readable data carrying medium containing a link-able executable program for a discovery programming interface for receiving device discovery data from the logical device; pg. 32, par. [0951]; device responses are delayed a random duration i.e. a random delay time; pg. 29, par. [0849]; a device multicasts a number i.e. a second or more responses, of discovery messages that are re-sent if the device remains available; pg. 15, par. [0406]; servers i.e. at least a second server, mainframe, and various computers work with Weisman's invention.).

Regarding claim 25, Weisman discloses a **computer program product as recited in claim 24, wherein the step for establishing a connection further comprises a step for determining not to establish a connection to the second server** (pg. 57, claim 9 references a computer-readable data carrying medium containing a link-able executable program for a discovery programming interface for receiving device discovery data from the logical device; pg. 29, par. [0849]; a device multicasts a number i.e. a second or more responses, of discovery messages that are re-sent if the device remains available. Messages include a duration until they expire. If the device is unavailable, the device cancels the discovery advertisement. The

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duration is a step for determining not to connect; pg. 15, par. [0406]; servers i.e. at least a second server, mainframe, and various computers work with Weisman's invention).

Regarding claim 26, Weisman discloses **a computer program product as recited in claim 25** (pg. 57, claim 9 references a computer-readable data carrying medium containing a link-able executable program for a discovery programming interface for receiving device discovery data from the logical device.), **wherein the step for determining not to establish a connection to the second server is based on at least one of: (i) whether the client has established a connection with another server** (pg. 29, par. [0849]; a device multicasts a number i.e. a second or more responses, of discovery messages that are re-sent if the device remains available. If the device is unavailable i.e. connected to another server or inoperative, the device cancels the discovery advertisement.); **and (ii) a characteristic of the server with which the client establishes a connection** (pg. 14, par. [0376, 0378]; requests from the device i.e. client establish a subscription, i.e. connection or re-subscription, i.e. second connection or connection to second server, with the server; pg. 15, par. [0395]; the server header, i.e. character information of the server is the version of the operating system on the computer, i.e. server).

Regarding claim 27, Weisman discloses **a method as recited in claim 26, wherein the characteristic of the server is a version of the server** (pg. 15, par. [0395]; the server header, i.e. character information of the server is the version of the operating system on the computer, i.e. server. Also see pg. 29, par. [0846]; version information is communicated in discovery and description messages).

Regarding claim 28, Weisman discloses **a computer program product as recited in claim 21, wherein the computer program code means is further comprised of executable**

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code for implementing: discovering a network disconnect; initiating a second request at the client to discover the particular information, wherein the second request is made using at least one of: (i) a broadcast procedure; and (ii) a multicast procedure (pg. 57, claim 9 references a computer-readable data carrying medium containing a link-able executable program for a discovery programming interface for receiving device discovery data from the logical device; pg. 29, par. [0849]; a device multicasts a number i.e. a second or more responses, of discovery messages that are re-sent if the device remains available. If the device is unavailable i.e. connected to another server or inoperative, the device cancels the discovery advertisement. A multicast refers to a multiplexed broadcast.); **receiving a subsequent response to the second request from the server after a random delay time** (pg. 32, par. [0951]; device responses are delayed a random duration i.e. a random delay time); **and establishing a second connection with the server** (pg. 29, par. [0849]; a device multicasts a number i.e. a second or more responses, of discovery messages that connects the device to the server).

Regarding claim 29, Weisman discloses **a method as recited in claim 28** (pg. 57, claim 9 references a computer-readable data carrying medium containing a link-able executable program for a discovery programming interface for receiving device discovery data from the logical device.), **wherein the request is further made using a randomized exponential backoff strategy** (pg. 32, par. [0951]; device responses are delayed a random duration i.e. a randomized backoff strategy).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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- US 6,332,163 to Michel Bowman-Amuah discloses a method for providing communications services over a computer network system.
- US 6,496,859 to Roy et al. discloses a system of device discovery using UDP based broadcasts.
- US 6,606,660 to Michel Bowman-Amuah discloses a system and method for providing a stream-based communication system.
- US 6,779,004 to William Zintel discloses a self-installing and configuring peer networking-to-host/peripheral connectivity adapter that involves device discovery and UDP.
- US 6,792,323 to Krzyzanowski et al. discloses broadcasting discovery control of a television via a server using UDP.
- US 6,892,230 to Gu et al. discloses a device control model for ad hoc peer networking for device discovery using multicasting and UDP.
- US publication number 2002/0035621 to Zintel et al. discloses a device control model that enables automatic ad-hoc self-setup of devices on a network using discovery, UDP, and multicasting.
- US publication number 2005/0021857 to Edward Balassanian discloses a media routing system that discovers devices connected to a network.
- US publication number 2005/0030892 to Hagen et al. discloses a system for discovery of peer nodes via broadcast and multicast in a network.
- US publication number 2005/108369 to Sather et al. discloses a system and method for configuring and managing network devices using discovery and broadcast.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tariq S. Najee-ullah whose telephone number is (571) 270-5013.

The examiner can normally be reached on Monday through Thursday 7:30 - 6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi T. Arani can be reached on (571) 272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN
October 4, 2007


TAGHI ARANI
PRIMARY EXAMINER

10/9/07